

Work Order ID 74223 LH

Tuesday, September 27, 2011 12:29:46 PM

Page 1

Item ID: D206-642-151

Revision ID:

Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00

Required Date: 11/4/2011 Req'd Qty: 1.00

Reference:

Accept

Setup Start

Stop

Cust Item ID:

Customer:

Approvals:

Process Plan: *mc*

Date: 11-09-28 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3804

A

IIN-D206-642

O

100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-151

CHG001

N/A *[Signature]*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D206-642-151

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00

Customer:

Reference:

Run Start



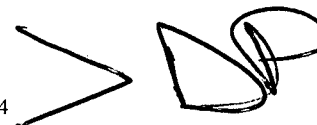
Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	1-Deburr Fwd edge of tube								
	2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804								
	3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required. Pick: Qty <input type="checkbox"/> Part Number <input type="checkbox"/> Description <input type="checkbox"/> Batch A/R <input type="checkbox"/> Aluminum Rod <input type="checkbox"/> m117884/m118736								
	4-Grind weld flush to cap on top surface only.								
	5-Cut Aft end as per dwg D3804 from front of tube and Deburr								
	6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804								
	7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.								
	8-Drill pilot holes using Dt8166 & DT8169D & DT9771.								
	9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.								
	10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.								



11-10-15

SAD 11-10-21

SAD 11-10-21

SAD 11-10-21

SAD 11-10-21

SAD 11-10-21

SAD 11-10-21

SAD 11-10-21

SAD 11-10-21

SAD 11-10-21

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Customer:

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Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill #30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.
****no wearplate holes for this skidtube****

17-Deburr tube and blow out chips from inside the tube

120



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

8 11/10/25

DC 11/10/25

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

① SAD 11-10-25

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 8 BE 11/10/25

160

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Open holes to finished size as per Dwg D3804, (without cutting fluid)

2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)

3-Deburr and blow out all chips from inside the tube

OC 11/10/25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

1 0 BE 11/10/25

180

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

DC 11/10/25

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12

Hrs. cure time before cutting

Start Date: 4/3/11 Time: 11-10-25

Finish Date: 11/10/26 Time: 2:00

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch

A/R ☐ Sikaflex-291 M118393 ☐

Sikaflex expire date: 12-05-05

SAD 11-10-25 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Process Plan: _____

Date: _____

Tooling: _____

Date: _____

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

1 0 BE 11/10/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch

A/R ☐ Aluminum Rod ☐ M117884

3-Grind welds flush as per Dwg D3804.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/R ☐ SS Rod ☐ NONE BE 11/10/26

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

BE 11/10/26

BB / 11/10/26

11-10-27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete each task.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals and identifying any areas for improvement.

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Accept

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Setup Start

Stop

[illegible]**Cust Item ID:****Customer:**

Reference:

Run Start

Stop

Operation Description

Set Up/ Run Hours

Tool ID

Tool #Plan
Code

**Accept
Qty**

Reject
Qty

Reject Number

**Insp.
Stamp**

0.00

00000000000000000000

HandFinishing

0.00

HandFinish

Memo

Hand Finishing

Install D2680-041 Nut Plate as per Dwg D3804

0.00

215

[illegible]

QC9- Inspect visual per QSI004- Fusion Welds

0,00

QC

Memo

Quality Control

0.00

220

QC10- Inspect visual per QSI004- ground welds

0.00

QC

Quality Control

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

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230

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8/10/27

Quality Control

240

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

1 BA 11-10-28

Hand Finishing

250

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

START TIME:
OVEN TEMPERATURE:
FINISH TIME:8:00
320°F
8:30

1XØ m 11/11/01

Powder Coating

M118439

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Run Start



Stop



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260	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00				<i>164</i>	<i>d</i>	<i>HL</i>	<i>u/v 10/</i>
Quality Control									
270	HandFinishing	0.00							
HandFinish	Memo	0.00				<i>164</i>	<i>d</i>	<i>HL</i>	<i>u/v 10/</i>
Hand Finishing	1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.								

W/O:		WORK ORDER CHANGES					
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280	HandFinishing	0.00							
	HandFinish								
Hand Finishing	<p>Memo</p> <p>1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive <input checked="" type="checkbox"/> A/R <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> <u>M119443</u> <input type="checkbox"/> Sikaflex expire date: <input type="checkbox"/> <u>12/01</u></p> <p>2- Install wearplate as per dwg</p> <p>2-Wing Walk as per Dwg D3804 and QSI 005 4.4 <input type="checkbox"/> Batch: <u>M118988</u></p>	0.00							
290	QC3- Inspect Part Finish	0.00							
	QC								
Quality Control	<p>Memo</p> <p><u>Sulphur</u></p>	0.00							

164 0 24 11/11/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74223

Tuesday, September 27, 2011 12:29:47 PM



Page 12

Item ID: D206-642-151

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
300 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<i>tl</i> <i>lk</i>			
310 Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPP D206-642-151 Location: _____ PPP Rev: _____	0.00 0.00				<i>11/11/16</i>			<i>PP 74338</i>
320 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							<i>11/11/17</i> <i>mf 11-11-16</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

Tuesday, September 27, 2011 12:29:40 PM

Work Order ID: 74223

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2620		Manufactured	No			110	Each	23.0000	1	1			
-------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--



Skidtube, 206 Skidtube

Location	Loc Qty	Loc Code
LG	23	
71616	5	
71617	6	
73781	5	
73786	3	
73787	4	

D2647		Manufactured	No			110	Each	36.0000	1	1			
-------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--



Cap

Location	Loc Qty	Loc Code
LG002	36	
55352	8	
71171	28	

CR3212-4-04		Purchased	No			180	Each	10,997.00	52	52			
-------------	--	-----------	----	--	--	-----	------	-----------	----	----	--	--	--



Cherry Rivet

Location	Loc Qty	Loc Code
ST311	997	
116471	78	
117816	179	
118686	1	
118840	739	
ST516	10000	
119017	10000	

11-10-15

BG 11/10/18
B 73826 v1

SS

11/10/26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng.	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, September 27, 2011 12:29:41 PM

Work Order ID: 74223

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2654-1
Web
Manufactured No

180 Each 12.0000 1 1



SAD 11-10-25

Location	Loc Qty	Loc Code
LG	12	
73789	10	
73790	2	

B73793

①

D3286-1
Doubler
Manufactured No

180 Each 80.0000 2 2



Location	Loc Qty	Loc Code
LG002	80	
64562	6	
74111	74	

②

11/10/26

D2649
Cross Bolt Spacer
Manufactured No

200 Each 1,995.000 19 19



19

BE 11/10/26

Location	Loc Qty	Loc Code
LG	736	
68224	2	
71355	2	
72704	2	
72841	130	
73855	600	
LG001	1259	
65317	1	
68507	11	
73390	47	
73857	600	
73860	600	

19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Tuesday, September 27, 2011 12:29:41 PM

1. The first step in the process is to identify the problem. This involves gathering information about the situation and the people involved.

2. The second step is to analyze the problem. This involves breaking the problem down into smaller parts and identifying the causes.

3. The third step is to develop a plan. This involves deciding on the best way to solve the problem and setting goals.

4. The fourth step is to implement the plan. This involves putting the plan into action and making any necessary adjustments.

5. The fifth step is to evaluate the results. This involves checking to see if the problem has been solved and if the goals have been met.

6. The sixth step is to reflect on the process. This involves thinking about what worked well and what could be improved for next time.

7. The seventh step is to share the results. This involves telling others about what you have learned and how you solved the problem.

8. The eighth step is to celebrate the success. This involves acknowledging the effort and achievement of everyone involved.

9. The ninth step is to learn from the experience. This involves using what you have learned to improve your skills and knowledge.

10. The tenth step is to continue to grow. This involves keeping an open mind and being willing to learn from new experiences.

**Start Date:** 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

200	Each	98.0000	2	2
-----	------	---------	---	---

Abstract

Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

LG001 83

74117 83

LG002 15

64564 15

D2680-041 Manufactured No

Abstract

Nut Plate

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

LG 73854 40

73334 40

CR3212-4-03	Purchased	No
-------------	-----------	----

[illegible]

Cherry Rivet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP-B 2

110139	2
--------	---

ST311 1114

114859 1114

ST318 1000

119017	1000
--------	------

AN960JD416 . NAS1149D0463J Purchased

1. The first step in the process is to identify the problem. This involves gathering information about the situation and the people involved.

2. The second step is to analyze the problem. This involves breaking the problem down into smaller parts and understanding the causes.

3. The third step is to develop a plan. This involves deciding on the best way to solve the problem and setting goals.

4. The fourth step is to implement the plan. This involves putting the plan into action and making changes as needed.

5. The fifth step is to evaluate the results. This involves checking to see if the problem has been solved and if the goals have been met.

6. The sixth step is to reflect on the process. This involves thinking about what worked well and what could be improved for next time.

7. The seventh step is to share the results. This involves telling others about what you have learned and how you solved the problem.

8. The eighth step is to continue to learn. This involves staying open to new ideas and ways of solving problems.

9. The ninth step is to be a good team player. This involves working well with others and helping them to solve their problems.

10. The tenth step is to be a good leader. This involves helping others to solve their problems and leading them to success.

Washer

~~No~~

210	Each	0.0000	1	1
-----	------	--------	---	---

118384

(x) All are 10.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, September 27, 2011 12:29:42 PM

Work Order ID: 74223

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

210

Each

1,401.000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

FP-B

2

113973

2

ST311

399

117086

21

117849

378

ST317

1000

119017

1000

② 11-10-27

MS27039-4-06

Purchased

No

210

Each

29.0000

1

1



Screw

Location

Loc Qty

Loc Code

FP-A

8

115460

8

ST292

21

115460

21

1119124

X1

D2651-1

Manufactured

No

270

Each

289.0000

6

6



Plug

Location

Loc Qty

Loc Code

fpa

109

69018

109

FP-A

180

57869

1

66445

10

67760

36

70691

100

70839

2

71037

31

B73827

X6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

•NOTE: Date & initial all entries

Picklist Print

Tuesday, September 27, 2011 12:29:42 PM

Work Order ID: 74223

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2651-3

Manufactured No

270

Each

1,799.000

6

6



O-Ring



ul 11/4/10

Location

Loc Qty

Loc Code

FP-A

1799

61962

12

66956

282

73489

505

73828

1000

X 6

D3873-1

Manufactured No

280

Each

599.0000

14

14



Bushing



ul 11/4/10

Location

Loc Qty

Loc Code

ST084

4

68247

4

ST088

595

64760

1

70690

47

71837

87

73399

60

73829

400

373831

y14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, September 27, 2011 12:29:42 PM

Work Order ID: 74223



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

280

Each

87.0000

1

1



Aft Cap



u u u u o

Location

Loc Qty

Loc Code

FP004

43

68280

43

FP006

5

62678

5

FP-4

35

70945

1

71070

34

fp5

4

71038

4

B73294

x1

D3805-041

Manufactured No

280

Each

0.0000

1

1



Wearplate Assembly Fwd, Low Gear

MS27039-1-08

Purchased No

280

Each

1,216.000

2

2



Screw



B74893(x1) u u u u o

u u u u o

Location

Loc Qty

Loc Code

ST291

1216

115108

16

117423

300

118378

400

118910

500

x2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, September 27, 2011 12:29:43 PM

Work Order ID: 74223

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

280

Each

8,411.000

7

7



Nut



ul ululol

Location

Loc Qty

Loc Code

ST300

2411

117441

16

117601

240

117885

155

118451

1000

118927

1000

ST516

6000

119017

6000

X7

D3805-045

Manufactured

No

280

Each

6.0000

1

1



Wearplate Assembly Aft, Low Gear



1374895(x1) ul ululol

Location

Loc Qty

Loc Code

FP

6

70878

6

AN960JD10L

NAS1149D0332J

Purchased

No

280

Each

0.0000

2

2



Washer

x1 11 7087



(x2) ul ululol

AN3-37A

Purchased

No

280

Each

261.0000

7

7



Bolt



ul ululol

Location

Loc Qty

Loc Code

ST353

211

111668

111

118628

100

ST354

50

117619

50

X7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Tuesday, September 27, 2011 12:29:43 PM

Work Order ID: 74223



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

280

Each

4,404.000

7

7



del u l i o (

Washer

Location

Loc Qty

Loc Code

ST298

4404

117601

274

118077

1130

118612

1000

118968

2000

v7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

74203

RELEASED
UP 09.03.03
per ECN 09-536

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	99		
DRAWN	99		
CHECKED	99		
MFG. APPR.	99		
APPROVED	99		
DE APPR.	99		
DATE	08.07.07		

DART AEROSPACE USA, INC	
PORT HADLOCK, WA	
DRAWING NO.	REV. A
D3804	SHEET 1 OF 5
TITLE	SCALE
SKIDTUBE ASSEMBLY, 206A/B	NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

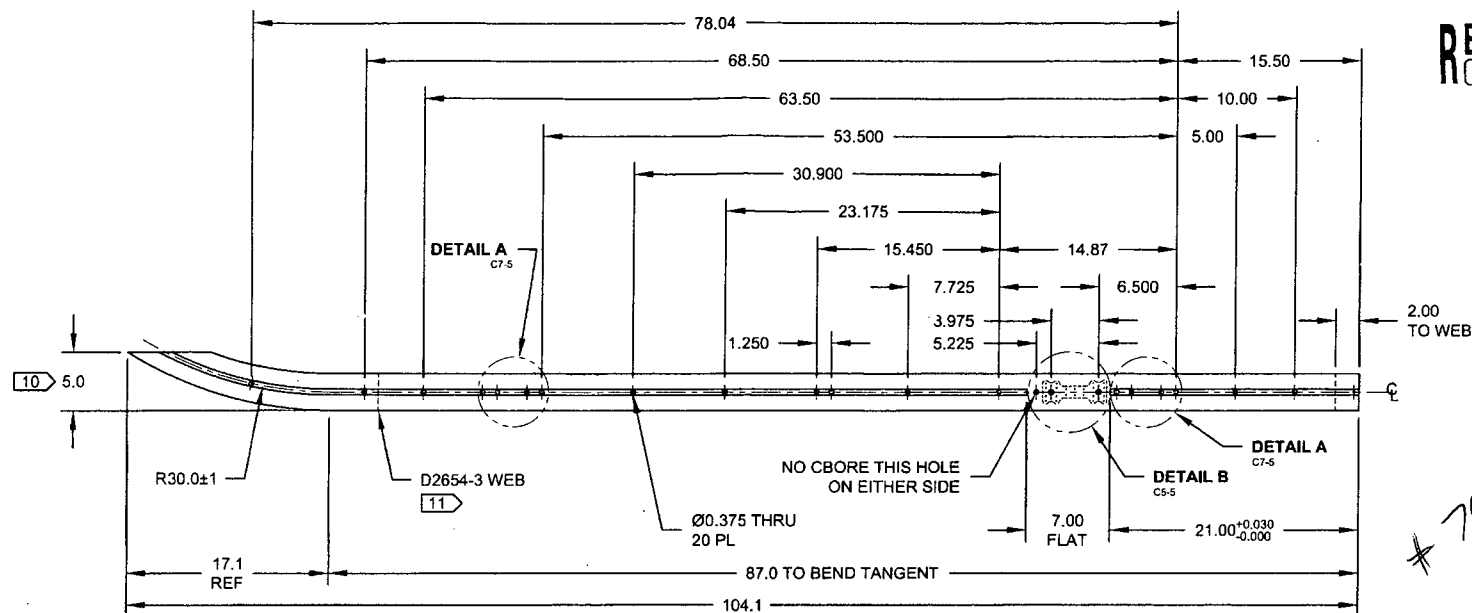
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

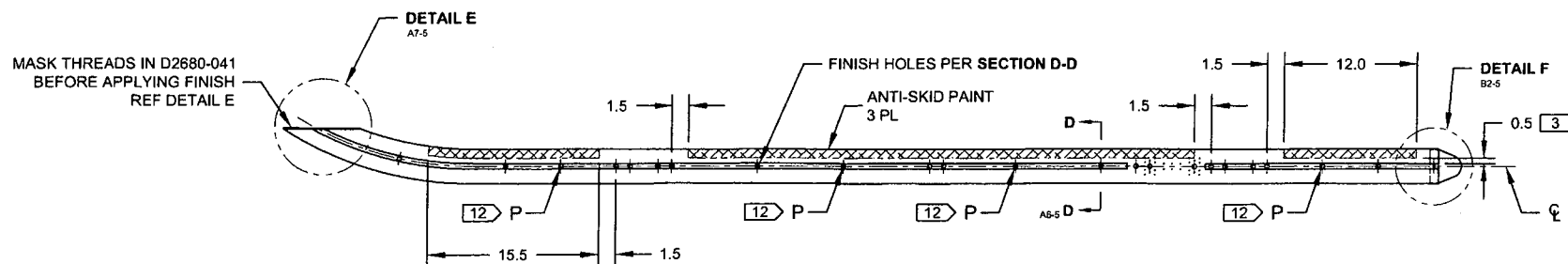
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
09.03.03



D3804-043 BENDING/DRILLING DETAIL



D3804-043 ASSEMBLY/FINISHING DETAIL

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 3 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

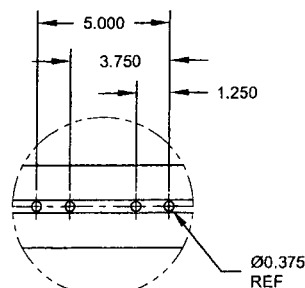
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

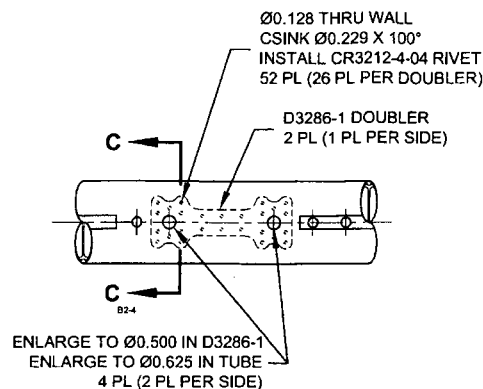
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

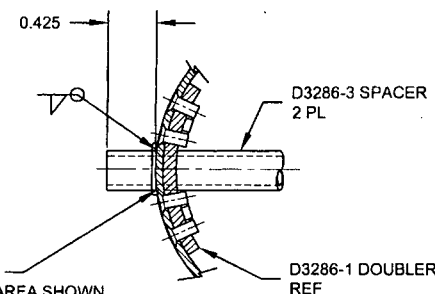
RELEASED
UP 09.03.03



DETAIL A
D6-2
C2-2
D6-3
C2-3
SCALE NONE

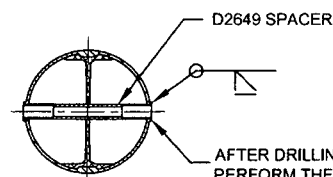


DETAIL B
C3-2
C3-3
SCALE NONE



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH

SECTION C-C C6-4
PARTIAL SECTION
SCALE NONE



SECTION D-D A4-2
A4-3
FOR Ø0.375 HOLES ONLY
SCALE NONE

- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	J	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 4 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
97 07 03 03

CCR264SS3-3
RIVET
2 PL

CR3212-4-03 RIVET
2 PL

VIEW G-G
SCALE NONE
A7-5

D2647 CAP, TO INSTALL:
1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS REQD)
4. WELD D2647 IN PLACE
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE
IN PLACE

MS27039-4-06 SCREW
AN960JD416 WASHER

D2680-041
NUTPLATE

1.0 REMOVE RIDGE ON
INSIDE OF SKIDTUBE
LEAVE 0.070 MIN.

DETAIL E
SCALE NONE
B7-2
B7-3

0.400

END OF WEB

SEAL WITH
SIKAFLEX-241/291

D2646 AFT CAP

Ø0.204
REF

MS27039-1-08 SCREW
AN960JD10L WASHER
2 PL

BORE OUT END
OF SKIDTUBE
TO 0.75 DEPTH
AND 0.070 WALL

DETAIL F
SCALE NONE
B2-2
B2-3

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	J	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 5 OF 5
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W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 273

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 74236
Part number: D206 642 151
Description: 206 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Sal Luss Date of Test Coupon 11-10-25
Welder Barclay Elliott Date of Test Coupon 11-10-25

The above named individual is qualified in accordance with AWS D17.1.2001 to weld